

REMARKS

This Amendment, submitted in response to the Office Action dated October 5, 2004, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Turning to the merits of the Office Action, claims 1-22 remain pending in the application. Claims 1-4 have been allowed, and claims 5-22 have been rejected under 35 U.S.C. § 102 as being anticipated by Shimizu (U.S. Pub. 2002/0093659 or EP 1 219 953 A1). Applicant propose the following arguments in traversal of prior art rejections.

Applicant's invention related to a surface plasmon measuring apparatus. In known measuring apparatus, a dark line corresponding to an attenuated total reflectance indicates subject matter of interest. The dark line may fall on one of plural photo detecting devices juxtaposed in a linear direction. In the event the sensitivity of the photo detecting devices is uneven, it may be difficult to identify the photo detector corresponding to the dark line, making correct analysis difficult.

Applicant's invention overcomes the above deficiencies. Referring to Fig. 1, an array of photo detectors 23a, 23b, 23c ... receive reflected light from a sample under study. A sensitivity part 27 corrects for sensitivity of the outputs S_a , S_b , S_c ... of the detectors. As one aspect, the sensitivity is compensated relative to an average sensitivity of the detectors under a known condition. As a further feature, a computation part 28 computes a skip difference, comprising a difference between outputs of alternating detectors, such as $S_c - S_a$; $S_d - S_b$. The position corresponding to the attenuation angle θ_{SP} will have monotonically increasing values for the skip difference on either side, as shown in Fig. 2 D.

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AMENDMENTS TO THE DRAWINGS

Figs. 1 and 9 are amended to provide appropriate descriptive labels, and to delete an item not referenced in the specification. The changes conform the drawings and written description.

No new matter is added.

Attachment: Annotated (2) Sheets

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Accordingly, the detector corresponding to θ_{SP} , such as attenuated reflection, can be detected accurately.

Turning to the cited art, Shimizu (U.S. Pub.) relates to adjustment of a dark line width to increase detection accuracy of the attenuated total reflection. In that regard, Shimizu merely teaches a differentiation comprising determining a difference between adjacent detectors and selecting the differentiator output most closely approximating zero. The EP Shimizu document includes analogous disclosure as the U.S. patent publication.

The Examiner maintains that Shimizu's U.S. Pub. teaches each feature of independent Claim 5. In this regard, the Examiner relies on the differentiator to teach the claimed difference means and signal processor to teach the claimed computing means. Applicant submits the rejection is not supported for at least the following reasons.

The claimed difference means computes a difference between optical detection signals, including a space of one light receiving element. By contrast, Shimizu (U.S. Pub.) calculates a difference between immediately adjacent detectors and thus does not include a space including one light receiving element.

Claims 6-22 are patentable based on their dependency. With further regard to claims 6-7, the Shimizu references do not mention an average calculation and with regard to claims 11-22, the Shimizu references do not mention any sensitivity determination. Therefore, these dependent claims are patentable for these additional reasons.

Applicant propose adding claim 23 to describe features of the invention more particularly.

In view of the above, Applicant submits that claims 1-23 are in condition for allowance. Therefore it is respectfully requested that the subject application be passed to issue at the earliest

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possible time. The Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

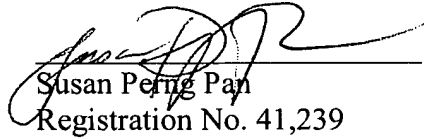
Respectfully submitted,

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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CUSTOMER NUMBER


Susan Pering Pan
Registration No. 41,239

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